

AMENDMENT TO CLAIMS

1. (currently amended) A system for reducing the apparent height of a board system, comprising:
 - a carrier;
 - wherein the carrier includes a printed circuit printed on at least a first side of the carrier;
 - a component mounted on a the first side of the carrier;
 - a printed circuit board having ~~with~~ a hole, the hole being structured to accommodate the component; and
 - a solder material soldering the carrier to the printed circuit board and providing a structural bond between the carrier and the printed circuit board, at least one portion of the solder material providing an electrical coupling between the carrier and the printed circuit board,
 - wherein at least one portion of the component is maintained in the hole after the carrier is soldered to the printed circuit board;
 - a paste material disposed between the component and the first side of the carrier, the paste material having a higher melting temperature than the solder material;
 - wherein the paste material is adapted to provide a bond and an electrical coupling between the component and the carrier;
 - the paste material further adapted to provide an electrical coupling between the printed circuit of the carrier and the component; and
 - the component is electrically coupled to the printed circuit board via the paste material.

2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (original) The system according to claim 1, wherein the solder material provides the only structural bond between the carrier and the printed circuit board.
8. (original) The system according to claim 1, wherein the solder material provides the only structural bond between the carrier and the printed circuit board.
9. (Currently Amended) A wireless communications device, comprising:
 - a duplexer;
 - a carrier board having a first side on which the duplexer is mounted using a paste material; ~~the duplexer~~;
 - a printed circuit board with a hole through which the duplexer fits; and
 - a solder material soldering the carrier board to the printed circuit board and providing a structural bond between the carrier board and the printed circuit board, wherein the paste material has a higher melting temperature than the solder material, and the duplexer is coupled electrically to the printed circuit board via the paste material, the carrier board and at least one portion of the solder material.
10. (Currently Amended) A computer system, comprising:
 - a printed circuit board;
 - a packaged integrated chip;

a carrier having a first side on which the packaged integrated chip is mounted
using a paste material;

a the printed circuit board with a hole through which the packaged integrated chip
fits; and

a solder material soldering the carrier and the printed circuit board, at least a
portion of the solder material providing an electrical coupling between the carrier and the
printed circuit board,

wherein the paste material has a higher melting temperature than the solder
material, and the packaged integrated chip is coupled electrically to the printed circuit
board via the paste material, the carrier board and at least one portion of the solder
material.

11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (Canceled)
16. (Canceled)
17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Withdrawn)
21. (Withdrawn)

22. (New) The system according to claim 1, wherein the hole extends through the printed circuit board.
23. (Withdrawn)
24. (Withdrawn)

DRAWING

1. The drawings are objected to under 37 CFR § 1.83(a). The drawings must show every feature of the invention specified in the claims. The applicant respectfully asserts that generally many different materials or combinations of materials may be adapted to form components shown in the FIGS. Specific examples will be discussed below.

The applicant would like to respectfully point out that “cross-hatching” is typically only used for a sectional drawing. For example, MPEP § 608.02 includes a diagram indicating that wood should be “cross-hatched” in a sectional drawing, and not “cross-hatched” in an elevation view. FIGS. 2 and 3 are not sectional drawings. Since FIGS. 2 and 3 are not sectional drawings, FIGS. 2 and 3 will not generally require “cross-hatching.” FIGS. 1, 4A, 4B, 5 and 6 may be sectional drawings, however, in some cases, for example, when a side is missing from the hole, FIGS. 1, 4A, 4B, and 5 may not be a sectional drawing. FIG. 6 also may, in some cases, not be a sectional drawing. FIG. 6 may simply be a side view.

The applicant also respectfully asserts 37 CFR § 1.84(n) indicates that “[g]raphical drawing symbols *may* be used...” (emphasis added). In other words, graphical drawing symbols, including cross-hatching, may be used, but are not required. Additionally, the applicant respectfully asserts that MPEP § 608.2 indicates that “[o]verly specific symbols should be avoided.” As stated above, many different materials or combinations of materials may generally be adapted to form the components shown in the FIGS. Since many different materials may generally be used, specifying a specific material would be “overly specific.”

Finally, the applicant would like to point out that the FIGS. are only examples of possible embodiments. In a specific example, a specific material may be used, however, the scope is limited only by the claims.

As an example, several features in claim 1, as currently amended, will be discussed. Claim 1 includes, in part, a solder material soldering a carrier to a printed circuit board. Solder material is typically an alloy of metals. The applicant proposes that FIGS. 1, 4B, and 5 may be modified to indicate that the solder is typically a metal material. The applicant respectfully asserts that the FIGS. are only examples of possible embodiments.

Claim 1 also includes a paste material disposed between the component and the first side of the carrier, the paste material having a higher melting temperature than the solder material. The paste material may be a solder paste. Solder paste is typically made from an alloy of metals. The applicant proposes that FIG. 1 may be modified to indicate that the paste material is typically a metal material. The paste material is not necessarily solder paste.

The applicant respectfully points out that FIG. 4B is a simplified FIG., similar to FIG. 1, that does not include a reference character for paste material. Paste material is not indicated on FIG. 4B. Since paste material is not indicated on FIG. 4B, the applicant respectfully asserts that no modification is needed regarding paste material with respect to FIG. 4B. FIG. 4B illustrates a height reduction of one possible embodiment and is not intended to be indicative of all features. Other embodiments are possible.

Claim 1 includes, in part, a carrier. The carrier may be made from a variety of different substances, such as, for example, printed circuit board material. The applicant

asserts that the exact material make up of the carrier is not a feature of the invention as currently claimed. The carrier may be made from material other than printed circuit board material. Additionally, the carrier may be made from a combination of materials. Similarly, the printed circuit board may be made from many different combinations of materials.

Claim 1 further includes a component mounted on the first side of the carrier. The component may be a duplexer. Duplexers are typically made from metal and ceramic materials. The component may also be made from other materials, depending on what type of component is used in the specific embodiment. The component may include semi-conductor material, plastic, metal, or ceramic material. The applicant asserts that the exact material used to make the carrier is not a feature of the invention as currently claimed.

Claim 1 further includes a printed circuit board having a hole. As discussed above, a printed circuit board may be made from many different materials. The applicant respectfully asserts that the exact material used to make the printed circuit is not a feature of the invention as currently claimed.

In summary, regarding the drawings, the applicant respectfully asserts that generally many different materials or combinations of materials may be adapted to form components shown in the FIGS and “[o]verly specific symbols should be avoided.” Use of specific symbols would generally be “overly specific.” Additionally, in some cases, while it may be instructive to indicate a material that may commonly be used, the drawings are only examples of possible embodiments. Finally, the applicant respectfully asserts that FIGS. that are not cross section do not generally require “cross-hatching.”